

FOCUS CONTROL SYSTEM

ABSTRACT OF THE DISCLOSURE

A process for controlling focus parameters in a lithographic process used in
5 manufacture of microelectronic circuits. The process comprises initially providing a
lithographic mask having a target mask portion containing a measurable dimension
sensitive to defocus, projecting an energy beam through the target mask portion onto a
first location of a substrate at a first focus setting, and lithographically forming a first
target on the substrate corresponding to the first focus setting, the first target
10 containing a measurable dimension sensitive to defocus. The process then includes
projecting an energy beam through the target mask portion onto a second location of
the substrate at a second focus setting, lithographically forming a second target on the
substrate corresponding to the second focus setting, the second target containing a
measurable dimension sensitive to defocus, and measuring the defocus sensitive
15 dimension for each of the first and second targets on the substrate. The defocus
sensitive dimension of the first and second targets are then compared and there is
determined a desired focus setting of the energy beam based on the comparison of the
dimensions of the first and second target. The process may be used to form focus
setting targets on a semiconductor wafer for use in manufacture of microelectronic
20 circuits.